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AMENDMENTS TO THE CLAIMS

Please cancel claims 9-20, 22, 28-39, 41-43 and 47-49.

Please amend claims 6 & 25.

Please add new claims 52, 53, 54 and 55.

1. (Previously Presented) Seed of maize inbred line designated PH54H, representative seed of said line having been deposited under ATCC Accession No. PTA-4259.

2. (Original) A maize plant, or parts thereof, produced by growing the seed of claim 1.

3. (Previously Presented) The maize plant of claim 2, wherein said plant has been detasseled.

4. (Previously Presented) A tissue culture of regenerable cells or protoplasts from the plant of claim 2.

5. (Previously Presented) The tissue culture of claim 4, cells or protoplasts of the tissue culture being from a tissue source selected from the group consisting of leaves, pollen, embryos, roots, root tips, anthers, silks, flowers, kernels, ears, cobs, husks, and stalks.

6. (Currently Amended) A maize plant regenerated from the tissue culture of claim 4, ~~capable of expressing~~ having all the morphological and physiological characteristics of inbred line PH54H, representative seed of which have been deposited under ATCC Accession No. PTA-4259.

7. (Original) A method for producing a first generation (F_1) hybrid maize seed comprising crossing the plant of claim 2 with a different inbred parent maize plant and harvesting the resultant first generation (F_1) hybrid maize seed.

8. (Previously Presented) The method of claim 7 wherein the inbred maize plant produced by growing the seed of inbred line PH54H, is the female or male parent.

9-20. (Cancelled)

21. (Previously Presented) A maize plant, or parts thereof, having all the

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23. (Previously Presented) A tissue culture of regenerable cells or protoplasts from the plant of claim 21.

24. (Previously Presented) The tissue culture of claim 23, cells or protoplasts of the tissue culture being from a tissue source selected from the group consisting of leaves, pollen, embryos, roots, root tips, anthers, silks, flowers, kernels, ears, cobs, husks, and stalks.

25. (Currently Amended) A maize plant regenerated from the tissue culture of claim 23, ~~capable of expressing~~ having all the morphological and physiological characteristics of inbred line PH54H, representative seed of which have been deposited under ATCC Accession No. PTA-4259.

26. (Original) A method for producing a first generation (F₁) hybrid maize seed comprising crossing the plant of claim 21 with a different inbred parent maize plant and harvesting the resultant first generation (F₁) hybrid maize seed.

27. (Previously Presented) The method of claim 26 wherein the plant having all the physiological characteristics of inbred line PH54H is the female or male parent.

28-39. (Cancelled)

40. (Previously Presented) A method for producing a first generation (F₁) PH54H-progeny maize plant, comprising:

- (a) crossing inbred maize line PH54H, representative seed of said line having been deposited under ATCC Accession No. PTA-4259, with a second maize plant to yield progeny maize seed;
- (b) growing said progeny maize seed, under plant growth conditions, to yield said first generation (F₁) PH54H-progeny maize plant.

41-43. (Cancelled)

44. (Cancelled)

45. (Cancelled)

47-49. (Cancelled)

50. (Cancelled)

51. (Cancelled)

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52. (New) A method of introducing male sterility into maize inbred line PH54H comprising:

(a) crossing the PH54H plants, grown from seed deposited under ATCC Accession No. PTA-4259, with plants of another maize line that comprise a nucleic acid molecule that confers male sterility to produce F1 progeny plants.

(b) selecting F1 progeny plants that comprise the nucleic acid molecule that confers male sterility;

(c) crossing the selected progeny plants with the PH54H plants to produce backcross progeny plants;

(d) selecting for backcross progeny plants that have the nucleic acid molecule that confers male sterility and physiological and morphological characteristics of maize inbred line PH54H listed in Table 1 to produce selected backcross progeny plants; and

(e) repeating steps (c) and (d) three or more times in succession to produce selected fourth or higher backcross progeny plants that comprise the nucleic acid molecule that confers male sterility and all of the physiological and morphological characteristics of maize inbred line PH54H listed in Table 1 as determined at a 5% significance level when grown in the same environmental conditions.

53. (New) A plant produced by the method of Claim 52, wherein the plant has the nucleic acid molecule that confers male sterility and all of the physiological and morphological characteristics of maize inbred line PH54H listed in Table 1 as determined at a 5% significance level when grown in the same environmental conditions.

54. (New) A method of producing a transgenic maize plant comprising transforming the maize plant of Claim 2 with a transgene, wherein said transgene confers disease, insect or herbicide resistance.

55. (New) The transgenic maize plant produced by the method of Claim 54.